ABSTRACT:

Detection unit for recovering a binary sequence (b_k) from an analogue signal (Sread) representing a runlength limited sequence (a_k) including a preliminary detection module (34) for generating a preliminary binary signal (Sb1) from the analogue signal (Sread) and a correction module for generating a corrected binary signal (b_k) from the preliminary binary signal, the correction module comprising

- a delay line (36, 38) having a chain of delay elements, coupled to the preliminary detection module (34),

- storage means (40, 42) for storing one or more first binary patterns and one or more second binary patterns for each of the first binary patterns,

- a comparator (44) coupled to the delay line (36) and the storage means (40), for outputting a detection signal (Sdet) indicating whether a sequence of bits present in the preliminary binary signal (Sb1) is identical to a first binary pattern,

- an evaluator (46) coupled to the storage means (40, 42) and to the input (30) for computing an evaluation value (Eval) indicating the likelihood that a binary pattern corresponds to the runlength limited sequence represented by the analogue signal (Sread),

- a selector (50) for selecting a binary pattern from the first binary pattern and the one or more second binary patterns for said first binary pattern having the highest likelihood,

- a corrector (50) for correcting the sequence of bits in the delay line (38) such that it corresponds to the selected binary pattern, if said selected binary pattern is not the first binary pattern,

an output (52) coupled to the delayline (38).

Figure 3.